

CLAIMS:

1. (Cancelled)

2. (Currently Amended) The method of claim 1 6
wherein, for at least some of said kinds of simpler sound
events with random time delays, the average rate of
generating said simpler sound event occurrences is
5 constant.

3. (Currently Amended) The method of claim 1 6
wherein, for at least some of said kinds of simpler sound
events with random time delays, the average rate of
generating said simpler sound event occurrences is time
5 varying.

4. (Original) The method of claim 3, wherein said
time varying average rate combines constant and time
varying components.

5. (Presently Amended) The method of claim 1 6,
wherein said random time delays are established in
accordance with white noise crossing a predetermined
threshold in a predetermined direction.

6. (Previously Presented) A method of synthesizing a
complex sound, comprising:

generating a plurality of different kinds of simpler
sound events with repetitive occurrences of each kind,

5 establishing respective random time distributions
for the occurrences of at least some of said kinds of
sounds, and

combining said simpler sound events into said
complex sounds,

10 wherein said random time distribution is established
in accordance with white noise crossing a predetermined
threshold in a predetermined direction, said white noise is
low pass filtered, and the filter bandwidth determines the
average rate of generating said sound event occurrences.

7. (Original) The method of claim 6, wherein said filter bandwidth is selectable.

8. (Original) The method of claim 6, wherein said white noise is filtered by a second-order filter having a frequency response characteristic $F(z)$:

$$F(z) = [(1+\alpha_1)(1+\alpha_1)]/[(1+\alpha_1 z^{-1})(1+\alpha_1 z^{-1})],$$

where $\alpha_1 = -1 + 2\pi R_{\text{avg}}/F_s$,

R_{avg} is the desired average rate, and

F_s is the filter sampling rate.

9. (Presently Amended) The method of claim 4 6, wherein said random time delays are predetermined for at least some of said kinds of simpler sound events.

10. (Previously Presented) The method of claim 9, wherein a random time delay to the next successive simpler

sound event occurrence is selected in response to each simpler sound event occurrence.

11. (Previously Presented) The method of claim 9, wherein an entire sequence of random time delays between said simpler sound event occurrences is selected prior to generating said simpler sound event occurrences.

12. (Presently Amended) The method of claim ~~4~~ 6, wherein said random time delays are user defined for at least some of said kinds of simpler sound events.

13. (Presently Amended) The method of claim ~~4~~ 6, wherein said simpler sound events with random time delays are characterized by a plurality of different parameters.

14. (Original) The method of claim 13, wherein said parameters include one or more of wave selection, pitch distribution, pan distribution and amplitude distribution.

15. (Cancelled)

16. (Previously Presented) The method of claim 13, wherein the values of said parameters are randomly varied among said simpler sound event occurrences for at least some of said kinds of simpler sound events.

17. (Previously Presented) The method of claim 16, wherein said random variation is user selectable.

18. (Previously Presented) The method of claim 17, wherein said random variation has a Gaussian distribution with user selectable mean and standard deviation values.

19. (Previously Presented) The method of claim 16, wherein said parameters have user selectable minimum and maximum values for at least some of said kinds of simpler sound events.

20. (Original) The method of claim 19, wherein a new parameter value is randomly selected if a selected parameter value does not fall within said minimum and maximum values.

21. (Previously Presented) The method of claim 16, wherein the values of said parameters have different respective random distributions for at least some of said kinds of simpler sound events.

22. (Previously Presented) The method of claim 16, wherein the values of said parameters have the same random distribution for at least some of said kinds of simpler sound events.

23. (Previously Presented) The method of claim 16, wherein the random distributions for at least some of said parameter values are variable for at least some of said kinds of simpler sound events.

24. (Previously Presented) The method of claim 23, wherein the average rate of generating said simpler sound

event occurrences is time varying, and said variable
parameter value random distributions are varied in
5 accordance with said average rate of generating said
simpler sound event occurrences.

25. (Original) The method of claim 16, wherein at
least some of said parameters are characterized by
respective parameter selectors.

26. (Previously Presented) The method of claim 25,
wherein the average rate of generating said simpler sound
event occurrences is time varying, and at least some of
said variable parameter selectors have random distributions
5 with average values that vary in accordance with the
variation in the average rate of generating said simpler
sound event occurrences.

27. (Original) The method of claim 25, said parameter
selectors including mean, standard deviation, minimum and
maximum values.

28. (Original) The method of claim 27, wherein said
parameter selectors vary with time in different respective
ways.

29. (Previously Presented) The method of claim 13,
wherein said method is used to generate sounds for a game,
and said parameters are varied for at least some of said
kinds of simpler sound events in accordance with the
5 occurrence of predetermined game events.

30. (Previously Presented) The method of claim 13, wherein the values of said parameters are user selectable for at least some of said kinds of simpler sound events.

31. (Original) The method of claim 13, wherein at least some of said parameters are characterized by respective random distributions of values having predetermined average values.

32. (Original) The method of claim 31, wherein at least some of said predetermined average values are varied during the course of generating a complex sound event.

33. (Currently Amended) The method of claim ~~1~~ 6, wherein said simpler sound events are stored in a digital wavetable synthesizer.

34. (Currently Amended) The method of claim ~~1~~ 6, wherein said simpler sound events are generated by an analog sound synthesizer.

35-46. (Cancelled)

47. (Currently Amended) The method of claim ~~1~~ 6, wherein said random time delays are independent of the durations of said simpler sound events.

48-50. (Cancelled)